Graduate Student Researchers Project (GSRP)

Administered by Cooperative Agreement between NASA and NASA Research and Education Support Services (NRESS)

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PROJECT DESCRIPTION

The NASA Graduate Student Researchers Program (GSRP) awards fellowships for graduate study leading to masters or doctoral degrees in the fields of science, mathematics, and engineering related to NASA research and development. This twelve-month award includes a required ten-week internship at the NASA center affiliated with the NASA sponsored research.

Training grants are awarded for one year in the amount of $30,000. This amount includes a $22,000 student stipend, a student travel allowance of $4,000, up to $1,000 for health insurance, and a $3,000 university allowance, which typically goes to the Research Advisor, who becomes the Principal Investigator for the Training Grant. Awards are renewable up to three years based on satisfactory academic advancement, research progress, and available funding.

PROJECT GOALS

Cultivate research ties to the academic community, to help meet the continuing needs of the Nation's aeronautics and space requirements by increasing the number of highly trained scientists and engineers in aeronautics and space-related disciplines, and to broaden the base of students pursuing advanced degrees in science, mathematics, and engineering. Research opportunities described on the GSRP Web site are assessed and updated annually to complement the mission

requirements of NASA. Research areas are in NASA core-competency disciplines that lead to aeronautic and space careers.

PROJECT BENEFIT TO OUTCOME (1, 2, OR 3)

GSRP directly addresses Outcome 1 and supports outcome 2 of the NASA education strategic plan. These outcomes commit the Education Office to fund programs which 1) contribute to the development of the STEM workforce, and 2) attract and retain students in STEM disciplines needed to achieve NASA strategic goals. Put simply, GSRP is an important contributor in developing NASA's future workforce as well as increasing the size and quality of the overall future aerospace workforce to which NASA contractors depend. Research shows that incorporating experiential opportunities into higher education programs provides several benefits over the traditional "lecture and lab" curricula including improved retention through graduation and into degree-related employment at NASA and its contractor partners.

PROJECT ACCOMPLISHMENTS *(CONNECTION BACK TO ANNUAL PERFORMANCE GOALS AND PLANS)*

For 2008, 174 graduate students were selected to receive GSRP fellowships, representing 41 separate institutions, 89 congressional districts, and 33 states, plus Puerto Rico. In 2008, GSRP fellows participated in ten-week research opportunities at all NASA centers including the Jet Propulsion Laboratory.

PROJECT CONTRIBUTIONS TO PART MEASURES (*INCLUDE DATA PLUS EXPLANATION)*

The need for increased STEM graduates in the U.S. is well documented. This need is dramatically magnified in the aerospace field. Documentation from the National Aerospace Initiative (2004) shows the average age of the U.S. aerospace workforce at 49. As many reports and studies affirm, the health of the aerospace

workforce is directly connected to America's long-term security interests – both economic and defense.

Research shows that one of the best methods of maximizing retention within the field of study is to incorporate hands-on research opportunities into the traditional course of study. Benefits in terms of retention to graduation, GPA at graduation, increased capability at graduation, pursuit of advanced degrees, and retention with the career field are well documented.

- In 2008, GSRP provided 174 STEM graduate students with $30,000 fellowship

- The project's goal is to select a geographically and institutionally diverse group of GSRP fellows from a wide array of backgrounds, who are fully representative U.S. graduate students enrolled in STEM majors

- Generate a large and appropriately diverse pool of candidates

<u>IMPROVEMENTS (e.g. project management, efficiencies, etc.) MADE IN THE PAST YEAR</u>

- In 2008, project management required that any graduate student awarded a GSRP fellowship must spend ten weeks at the NASA center extending the fellowship. The purpose for imposing this requirement on the student is to better acquaint the NASA center research advisor with the student, thus increasing the students chances for full-time employment.

- A new tier-system was developed for allocating the annual GSRP budget. The new system counts the total number of GSRP applicants at each NASA center over the past three years. Centers with the highest number of applicants received the most fellowship funding, thus allowing NASA's largest research centers to make the most awards to GSRP candidates. This will

- PROJECT PARTNERS AND ROLE OF PARTNERS IN PROJECT EXECUTION (*THIS IS WHERE FURTHER FOLLOW-UP TO OCCUR FOR COLLECTING 2008 GRANTEE PERFORMANCE SUMMARIES FOR PUBLISHING TO OUR EDUCATION HOME PAGE)*

- See attached FY08 PART spreadsheet